



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

VIII. *Account of the BANYAN-TREE, or FICUS INDICA, as found in the ancient Greek and Roman Authors. By GEORGE HENRY NOEHDEN, LL.D. Secretary R.A.S. F.R.S. &c.*

Read March 6, 1824.

AMONG the objects of Natural History, which attracted the attention, and excited the wonder of the followers of Alexander the Great, when that illustrious conqueror carried his victorious arms across the Indus, was the BANYAN, or INDIAN FIG-TREE. It is well known that that extraordinary man, whose talents, as well as achievements, have certainly no parallel in history, was generally imbued with a love of science, and, as Pliny expresses it, inflamed with a passion for Natural History.* To his great preceptor, ARISTOTLE, he had delegated the care of digesting, and elucidating, the vast materials that were collected, in the king's progress through a quarter of the globe, which, to the inhabitants of Europe, was absolutely a new world. It is to be presumed that, by the orders of Alexander, not only specimens of natural productions were looked for, but that observations were also made, on the spot, by competent persons, on such objects as could not be removed. Both the one and the other were placed at the disposal of Aristotle, who by dint of his powerful mind, and with the assistance of an immense fund of knowledge, brought the rude materials, furnished to him, into a system of scientific arrangement. According to Pliny, as

* Pliny speaks, in particular, of one branch of natural history, namely, zoology, in the cultivation of which, he says, Alexander had taken a warm interest: but no remarkable object could be indifferent to such a mind. Nat. Hist. VIII. 17. Vol. II. p. 79. ed. Bip. *Alexandro Magno rege inflammato cupidine animalium naturas noscendi, delegatâque hac commentatione Aristoteli, summo in omni doctrinâ viro, aliquot millia hominum in totius Asiæ Græciæque tractu parere jussa, omnium quos venatus, ancupia, piscatusque alebant: quibusque vivaria, armenta, piscinæ, aviaria, in curâ erant: ne quid usquam gentium ignoraretur ab eo: quos percontando quinquaginta ferme volumina illa præclara de animalibus condidit.* The immense sums of money, which the king, besides, bestowed upon Aristotle, for the prosecution of his researches, are mentioned by Athenæus IX. p. 398, &c. Casaub. (IX. c. 13. T. III. p. 447. ed. Schweigh.) This grant of money Ælian (Var. Hist. IV. 19.) by a mistake, attributes to Philip, the father of Alexander. See Buhle in Aristotelis Vita (Vol. I. Oper. Aristotel.), p. 96; and Schlegel's Indische Bibliothek. Vol. I. p. 160.

quoted below,* he wrote about fifty volumes on the History of Animals, or, as we should say, on Zoology alone: and we know from other sources, that he also composed a work on Plants,† or on Botany. In the latter, the mention of such a production as the Banyan-tree, could not have been omitted. It is our misfortune to lament, that of these interesting writings comparatively very little has been preserved to us. Of the work on Animals, a certain portion remains; and there, indeed, also exists a book on Plants, attributed to Aristotle, but unquestionably spurious. His researches, however, may be traced in authors that wrote after him, and who enjoyed the advantage of the information which he had gathered. Thus Pliny‡ declares, that the greatest part of what he himself has written on zoology, is taken from the works of Aristotle; and we may justly conclude, that Theophrastus, an author to whom our attention will be presently directed, has built on the same foundation.

Whatever passed through the hands of Aristotle, on subjects of Natural History, must be allowed to have had a value beyond that which any other writer could have given it, both on account of his acuteness and intellectual superiority, and of the channels, through which his information was derived. It is not possible to conceive, as has before been intimated, that among the natural curiosities of India, of which, through the interposition of Alexander, he obtained a knowledge, such a phenomenon in the vegetable world, as the Banyan-tree, should have escaped him; more especially, when it is considered, that even writers, as will be shown afterwards, who merely employed themselves in recording the military and political achievements of Alexander, could not forbear noticing that remarkable object.

Hence it appears probable, that Theophrastus, who was the favourite and most distinguished pupil of Aristotle, and who succeeded him in the Lyceum, as head of the Peripatetic school, gained, in substance, what he has left recorded of the Banyan, from the literary stores of his master, to

* N. H. VIII. 17. Bip. The passage has been transcribed in the foregoing note.

† Περὶ φυτῶν ἁ β', *de plantis libri duo*, two books on plants. See the Life of Aristotle, by Diogenes Laertius, in the 1st volume of Buhle's edition of Aristotle's works, p. 22. Also his life by an anonymous author; ib. p. 64.

‡ Nat. Hist. VIII. 17. Vol. II. p. 79. ed. Bip.—*quinquaginta ferme volumina illa præclara de animalibus condidit; quæ a me collecta in arctum, cum iis quæ ignoraverat, quæso ut legentes boni consulant, in universis rerum naturæ operibus, medioque clarissimi regum omnium desiderio, curâ nostrâ breviter peregrinantes.*

which, undoubtedly, he had access: and this circumstance will recommend the passages, which I am about to introduce, to our particular regard.

We are in possession of two botanical works of Theophrastus, one inscribed the *History of Plants*,* and the other rather unintelligibly entitled *On the Causes of Plants*.† In this last work, he treats of the peculiarities of different plants, of which peculiarities he endeavours to assign the reasons, or causes; hence that laconic and awkward denomination. It is a sort of Botanical Physiology. In both works, the Banyan-tree is mentioned, and altogether very fully, and accurately described. Theophrastus calls it the *Indian Fig*, an appellation which was given to it, by the followers of Alexander, on account of the resemblance, as he states, which the form of the fruit has to the common fig. It is singular to observe, that the name, which this plant bears in modern botany, *Ficus Indica*, should have been bestowed upon it, more than three hundred years before our era, perhaps at the very first moment that it was seen by the eye of an European. But modern science classes it with *Ficus*, not merely for the reason which Theophrastus alleges, but because it is marked with all the characters which belong to that genus.

I now shall cite the passages themselves, from Theophrastus. The first occurs in the first book, the twelfth chapter, of the *History of Plants*. He there speaks of the curious mode of its rooting, and says thus:‡ “The nature and property of the Indian Fig, with regard to its rooting, are peculiar; for it sends forth roots from the young branches, which roots are lengthened, till they come in contact with the ground, and strike into it. There is thus formed a continuation of roots, in a circle, round the tree, which does not approach the stem, but remains at a distance.”

The next, and principal passage, is in the fifth chapter of the fourth book, in the same work, and to this effect:§ “The country of India produces

* *Historia Plantarum*.

† *De Causis Plantarum*.

‡ *Historia Plantarum*, lib. I. c. 12. p. 13. (ed. Heinsii, Lugd. Bat. 1693.) Ἰδία δὲ ρίζης φύσις καὶ δύναμις ἢ τῆς Ἰνδικῆς συκῆς ἂπὸ γὰρ τῶν βλαστῶν ἀφίησι μέχρις οὗ ἂν συνάψῃ τῇ γῇ καὶ ριζωθῇ καὶ γίνεται περὶ τὸ δένδρον κύκλῳ συνεχὲς τὸ τῶν ριζῶν, οὐχ ἀπτόμενον τοῦ στελέχους, ἀλλὰ ἀφεστηκός.

§ *Historia Plantarum*, lib. IV. c. 5. p. 77. Ἡ δὲ Ἰνδικὴ χώρα τήν τε καλουμένην ἔχει συκὴν, ἢ καθήσιν ἐκ τῶν κλάδων τὰς ρίζας ἂν ἕκαστον ἔτος, ὥσπερ εἴρηται πρότερον ἂφίησι δὲ οὐκ ἐκ τῶν νέων, ἀλλ' ἐκ τῶν ἑνῶν, καὶ ἔτι παλαιότερων· αὗται δὲ συνάπτουσιν τῇ γῇ, ποιοῦσιν ὥσπερ δρύφρακτον κύκλῳ περὶ τὸ δένδρον, ὥγε γίνεσθαι καθάπερ σκηνήν, ὑφ' αἷς καὶ εἰώθασι διατρίβειν. εἰσι δὲ αἱ ρίζαι φυόμεναι

“ what is called the *Indian Fig*, which every year sends out roots from its
 “ branches, as before has been mentioned ; it emits them not from the
 “ young shoots, but from those of the year before, or even older ones.
 “ These, coming in contact with the ground, form a sort of inclosure, in
 “ a circle round the tree, so as to have almost the appearance of a tent (or
 “ arbour) under which the people are also in the habit of dwelling. The
 “ roots, when produced, may be distinguished from the shoots, or young
 “ branches, by being whiter : they are thick and twisted, and furnished
 “ with two leaves. The tree has a great deal of foliage above, assumes
 “ altogether a well rounded form, and is of extraordinary size. For it is
 “ said, that it throws its shade over a circumference of two *stadia* (or more
 “ than twelve hundred feet). The thickness of the stem is in some more
 “ than sixty paces, and in the generality forty paces. It has a leaf not
 “ less than a *pelta*, or Thracian shield, and fruit very diminutive, about
 “ the size of a large pea, or small bean, and resembling a fig, for which
 “ reason the Greeks have called it a *Fig-tree* ; the fruit is extremely small,
 “ not only in proportion to the size of the tree, but considered of itself.
 “ This tree grows near the river Acesines.”

The third passage, in which Theophrastus speaks of this tree, is in the work, *On the Peculiarities of Plants, and their Causes*, in the second book, the fourteenth chapter.* “ Those plants,” he says, “ which tend to a great
 “ size, are apt to have small fruit, as, for instance, the tree called the
 “ *Indian Fig*. For being of wonderful magnitude, it has, by nature, its
 “ fruit extremely small and insignificant, as spending all its nourishment
 “ upon the leaves and branches ; for it has very large foliage. And to the
 “ same cause of superabundant nourishment seems to be attributable the

διάδηλοι πρὸς τοὺς βλατούς · λευκότεραι γὰρ, καὶ δασεῖαι, καὶ σκολιᾶι, δίφυλλοι · ἔχει δὲ τὴν ἄνω κόμην
 πολλήν · καὶ τὸ ὅλον δένδρον εὐκυκλον · καὶ τῷ μεγέθει μέγα σφόδρα · καὶ γὰρ ἐπὶ δύο γάδρα ποιεῖν φασὶ
 τὴν σκιάν · καὶ τὸ πάχος τοῦ γελέχρους ἕναι πλείονων ἢ ἐξήκοντα βημάτων, τὰ δὲ πολλὰ τετταράκοντα ·
 τὸ δὲ γε φύλλον οὐκ ἔλαττον ἔχει πέλτης · καρπὸν δὲ σφόδρα μικρὸν, ἡλικὸν ἐρέβινδος, ὁμοίον δὲ συκᾷ ·
 διὸ καὶ ἐκάλουν αὐτὸ οἱ Ἕλληνες συκὴν · ὀλίγον δὲ σαυμαγῶς τὸν καρπὸν, οὐχ ὅτι κατὰ τὸ τοῦ δένδρου
 μέγεθος, ἀλλὰ καὶ τὸ ὅλον · φύεται δὲ τὸ δένδρον περὶ τὸν Ἀκεσίην ποταμὸν ·

* De Causis Plantarum, Lib. II. c. 14. p. 249.—Τὰ εἰς μέγεθος ὠρμημένα μικροκαρπότερα, κα-
 θάπερ καὶ ἡ Ἰνδικὴ συκὴ καλουμένη · σαυμαγὴ γὰρ οὖσα τῷ μεγέθει, μικρὸν ἔχει φύσει σφόδρα τὸν καρπὸν
 καὶ ὀλίγον, ὥς εἰς τὴν βλάστησιν ἐξαναλίσκουσα πᾶσαν τὴν τροφὴν · καὶ γὰρ σφόδρα μεγαλόφυλλος · ἀφ’
 ᾧ ἔοικε διὰ τὴν εὐβοσίαν καὶ ἡ τῶν ριζῶν καδιεμένων εἶναι γένεσις · ἴσως δ’ ἀνάπαλιν, ὅτι καὶ εἰς ταῦτα
 καταμερίζεται, διὰ τοῦτο οὖν ἀσθενεστέρος ἐστὶ καὶ ἐλάττων ὁ καρπός ·

“ production of the roots, which are emitted from the branches; or, perhaps, the nourishment being divided between the roots and the branches, the fruit is, for this reason, weaker and smaller.”

Such is the description which Theophrastus gives of the Banyan. It is full and detailed, clear and accurate. In commenting upon it, I shall advert to such parts as differ from modern accounts, or otherwise require explanation. The author uses a cautious mode of expression, when speaking of particulars, which might easily be liable to exaggeration. Thus, where the extent is mentioned, to which the shadow of the tree reaches, he employs the phrase, *they say*, or, *it is said*: “ It is said that the tree throws its shade over a circumference of two stadia.” A stadium may be reckoned at six hundred English feet; the shade of the tree, therefore, is said to cover about twelve hundred feet, in circumference. If we compare this statement with modern accounts, for instance, that given by Mr. Marsden, in his *History of Sumatra*,* we shall hardly think it magnified. That gentleman, in speaking of the Banyan-tree at Mangée, in Bengal, computes the circumference of its shadow, at noon, at eleven hundred and sixteen feet, between which, and the measure of two stadia, rated by us at twelve hundred feet, there is no great difference. Mr. Marsden gives the diameter of the stem of the tree at Mangée, three hundred and sixty-three to three hundred and seventy-five feet: Theophrastus estimates the thickness† of the stem, by which likewise the diameter must be understood, at sixty paces, or scarcely one hundred and eighty feet, in some trees, and at forty paces, or under one hundred and twenty, in the generality. If there is an exaggeration as to this point, I should suspect it to be in the modern account.‡ Theophrastus probably

* Third edition, p. 163.

† Τὸ πᾶχος τοῦ στελέχους.

‡ There may perhaps have been some inaccuracy in the calculations with which Mr. Marsden was furnished; for it does not appear that he measured the tree alluded to himself. I find it difficult to reconcile some of the dimensions, as they are given. In the text, Mr. Marsden expresses himself thus: “ It (the Banyan-tree) possesses the uncommon property of dropping roots or fibres from certain parts of its boughs, which, when they touch the earth, become new stems, and go on increasing to such an extent, that some have measured, in circumference of the branches, upwards of a thousand feet, and have been said to afford shelter to a troop of horse.” To that passage a note is subjoined to this effect: “ The following is an account of the dimensions of a remarkable banian or bur-tree, near Mangée, twenty miles west of Patna, in Bengal: Diameter, three hundred and sixty-three to three hundred and seventy-

came nearer to the truth. The roots, that shoot out from the branches, are no where so accurately described. They are thick * and twisted, he says, and distinguishable from the branches, from which they proceed, by a lighter colour. And he adds a particular circumstance, namely, that they are διφύλλοι, two-leaved, that is, furnished with two leaves, or *stipulae*, as modern botanists would call them, probably at the spot where the roots issue from the branches. I have not seen this noticed in any modern description, either botanical or other. The size of the leaf is perhaps the only thing that is overrated: it equals, he says, a *pelta*, that is to say, a small Thracian, or, as it is also called, Amazonian † shield. Modern botanical accounts represent the leaf as of about a span, that is to say, nine or ten inches in length, whereas the *pelta* must have been more than double that measure. The fruit is by modern botanists said to be of the size of a hazel-nut; and Theophrastus compares it to an ἐπεὶ σός, which seems to have been a large pea, or a sort of kidney-bean. The river *Acesines*, near which, he says, the tree grows, is supposed to be the *Ravi*, one of the four or five streams that, flowing from the eastward, unite their waters with the Indus.

The account of Theophrastus is the foundation of Pliny's description, which shall now follow. In speaking generally of India, this author remarks that that country produces the largest animals; and then he goes on to say, ‡ "There also grow, according to report, trees of such extraordinary

" five feet. Circumference of shadow at noon eleven hundred and sixteen feet. Circumference
 " of the several stems, in number fifty or sixty, nine hundred and twenty-one." Now if some trees, as is said in one place, have measured in circumference of the branches, upwards of a thousand feet; or if, as is stated in the note, the circumference of the shadow at noon is eleven hundred and sixteen feet, it is not to be conceived how the diameter of the stem alone can be from three hundred and sixty-three to three hundred and seventy-five feet, or its circumference nine hundred and twenty-one. The whole computation, I confess, is not clear to my view; and perhaps some error in the numbers may have taken place.

* Mr. Marsden speaks of what Theophrastus calls the roots, in this manner, p. 163: "The tree possesses the uncommon property of dropping roots or fibres from certain parts of its boughs, which, when they touch the earth, become new stems. These fibres look like ropes attached to the branches."

† Pliny (Nat. Hist. XII. 11. p. 326. Vol. II. ed. Bip.) says: "*Foliorum latitudo peltæ effigiem Amazonicæ habet.*" Milton, in a passage to be quoted afterwards, calls this shield, *Amazonian targe*.

‡ Pliny, Nat. Hist. VII. 2. Vol. II. p. 9. ed. Bip. *Maxima in Indiâ gignuntur animalia. Arbores*

“ height, that you cannot shoot an arrow over them. It is owing to the
 “ richness of the soil, the temperature of the climate, and the abundance
 “ of water, that (if we may believe it) there is a species of fig-tree, under
 “ whose branches whole troops of horsemen may be concealed.” The
 very high tree, to which Pliny first alludes, may perhaps have been the
 great *Fan-Palm* (*Corypha umbraculifera*): but he has no name for it. The
 report of it, as of most of the productions of India, came from the Macedonians
 that composed the expedition of Alexander the Great; and these, though they
 gave an account of many trees, left most of them without names, as Pliny in another * place has observed: which circumstance rendered
 them indistinct and doubtful objects. The Banyan-tree was exempt from this
 defect, having, as before noticed, been called *Indian Fig-tree*, from the first
 moment that the Macedonians saw it. From its being designated as a Fig-tree,
 in the passage of Pliny, above recited, we know that it is the *Banyan*, of which
 the author is speaking.

This tree was among the objects, which were brought to the knowledge of the
 western world, by the expedition of Alexander. As such it is mentioned by Pliny,†
 who describes it in the following manner:‡ “ It has very
 “ small fruit. Continually propagating itself, it overspreads a vast space
 “ with its branches, the lowest of which are in such a manner bent towards
 “ the ground, that every year a portion of them strike into it, and produce
 “ a new offspring around the parent-tree, forming themselves into a circle,
 “ as if it were done by the hand of art. Within this enclosure the shep-

bores quidem tantæ proceritatis traduntur. ut sagittis superjaci nequeant. Hæc facit ubertas soli, temperies coeli, aquarum abundantia (si libeat credere) ut sub unâ ficu turmæ condantur equitum.

* Nat. Hist. XII. 13. Vol. II. p. 327. ed. Bip. *Genera arborum Macedones narravere, majore ex parte sine nominibus.*

† Nat. Hist. XII. 10. p. 326. *Nunc eas (arbores) exponam, quas mirata est Alexandri Magni victoria, orbe eo patefacto.*

‡ Nat. Hist. XII. 11. p. 326. *Ficus ibi exilia poma habet. Ipsa se semper serens, vastis diffunditur ramis; quorum imi adeo in terram curvantur, ut annuo spatio infigantur, novamque sibi propaginem faciant circa parentem in orbem, quodam opere topiario. Intra sepem eam æstivant pastores, opacam pariter et munitam vallo arboris, decorâ specie subter intuenti, proculve, fornicato ambitu. Superiores ejusdem rami in excelsum emicant, silvosâ multitudine, vasto matris corpore, ut LX. passus plerique orbe colligant, umbrâ vero bina stadia operiant. Foliorum latitudo peltæ effigiem Amazonicæ habet: hac causâ, fructum integens, crescere prohibet. Rarusque est, nec fabæ magnitudinem excedens: sed per folia solibus coctus, prædulci sapore, dignus miraculo arboris. Gignitur circa Acesinem maxime annem.*

“ herds shelter themselves, in summer, as it affords them both shade, and
 “ a kind of fenced protection, which presents an elegant appearance, when
 “ you look under it, or view it at a distance, the whole resembling a
 “ vaulted, or arched edifice. The upper branches spring, like a forest,
 “ from the vast body of the mother-tree : most of them measure sixty paces
 “ (nearly one hundred and eighty feet) in circumference ; and they cover
 “ a space of two *stadia* (or upwards of twelve hundred feet) with their
 “ shadow. The broad leaves of the tree have the shape of an Amazonian
 “ shield : covering the fruit, they prevent it, by this means, from growing ;
 “ the fruit is thinly scattered, and does not exceed the size of a (kidney)
 “ bean : it becomes matured by the heat of the sun, penetrating through
 “ the leaves, is of a very sweet taste, and by its peculiarity adds to the
 “ wonders of the tree. The tree grows particularly near the river
 “ Acesines.”

Before I proceed to make any observations on this passage, I will, while the impression of it is fresh in the recollection, subjoin the well-known lines of Milton * relating to the Banyan-tree, which will be found to be copied from Pliny's description. The poet, speaking of our first parents, after the fall, when they felt shame, and sought for means to cover their bodies, continues thus :

“ So counselled he (Adam), and both together went
 “ Into the thickest wood : there soon they chose
 “ The fig-tree, not that kind for fruit renown'd,
 “ But such as, at this day, to Indians known
 “ In Malabar or Decan, spreads her arms,†
 “ Branching so broad and long, that in the ground
 “ The bended twigs take root,‡ and daughters § grow
 “ About the mother-tree, a pillar'd shade ||
 “ High overarch'd, and echoing walks between.
 “ There oft the Indian herdsman, shunning heat,

* In *Paradise Lost*, IXth Book, v. 1099 to 1111.

† Plin. *Vastis diffunditur ramis.*

‡ *Adeo in terram curvantur, ut annuo spatio infigantur.*

§ *Novamque sibi propaginem faciant circa parentem in orbem ;* and afterwards, *superioris ejusdem rami in excelsam emicant-vasto matris corpore.*

|| *Decorá specie, subter intuenti, proculve, fornicato ambitu.*

“ Shelters* in cool, and tends his pasturing herds,
 “ At loop-holes, cut through thickest shade. Those leaves
 “ They gather'd, broad as Amazonian † targe.”

Pliny was familiar with the writings of Theophrastus, for he repeatedly refers to him in his work, and it is evident that he almost transcribed the passage, concerning the Banyan-tree, from that author. But he has not done it with that accuracy, which ought to be expected, on such a subject. He omits, or alters, some essential points. In speaking of the lower branches striking into the ground, he does not notice the roots that issue from those branches, which are the means of bringing the latter in contact with the earth; yet this is a peculiarity most remarkable. From Pliny's account it would appear, as if the branches merely had a tendency to be bent downwards, and thus reached the ground, where they afterwards took root: but this is quite a false representation. He is equally incorrect, when he assigns the measure of sixty paces to the circumference of the upper branches, which Theophrastus gives as the dimension of the stems of the different young trees, produced round the parent stock. He expresses himself indistinctly respecting the shade, which proceeds from the tree. Like Theophrastus, he says, that it extends over two stadia, or about twelve hundred feet; but he so places this in the context, that it seems to be the shade of the upper branches of which he is speaking, instead of that of the whole tree, which Theophrastus clearly designs. The leaves Pliny characterizes by their breadth, which, he says, gives the idea of an Amazonian shield, or *pelta*: the comparison should be as to the size of the leaf generally, in which acceptance Theophrastus likens it to the same shield. The reason which Pliny alleges for the smallness of the fruit, is not such as an intelligent naturalist ought to have given: he says, it is owing to the large leaf, by which the fruit is covered, and its growth impeded. This must mean, that the fruit, being excluded from the influence of the sun, by the intervention of the leaf, is stunted: yet he presently talks of the effect of the sun upon that very fruit, in maturing and sweetening it.

* *Intra sepem eam æstivant pastores, opacam pariter et munitam vallo arboris.*

† *Foliorum latitudo peltæ effigiem Amazonicæ habet.*

Pliny appears to great disadvantage, by the side of such an author as Theophrastus. The information which he collected, upon almost every subject, though vast in quantity, loses much of its value, from the precipitation with which it was taken up. His inordinate desire of reading every thing that could be read, which is admirably described by his nephew,* and the ambition of making extracts from a multitude of authors, left him no time for digesting what he had thus heaped together, much less for exercising any judgment, or discrimination. His extreme parsimony of time would naturally induce hurry, in making his extracts, which proved another source of inaccuracy. It is, for these reasons, not to be wondered at, that the correctness of Pliny's statements should, on many occasions, be subject to doubt, and that his authority should be brought into question. It is probable, also, that he may have mixed with the account of Theophrastus some other narration, less accurate; such, for instance, as might be found in those historical writers, who had described Alexander's expedition. It has been observed, that Theophrastus likens the size of the fruit of the Banyan to a sort of legume, which he calls ἐρέβινθος, and it has been said that this was either a kind of large pea, or some variety of bean. Pliny uses the expression *faba*, bean, as synonymous with the term ἐρέβινθος: and we shall perhaps be near the truth, if we suppose, that what both authors had in view, was some kind of kidney-bean, approaching the size of a hazel-nut, stated by modern botanists to be about the dimension of the fruit of the Banyan. *Faba*, in classical Latin, does not signify the common garden-bean, but seems to be a general term for both the *phaselus* and the *phaseolus*; which latter is the kidney-bean, the former the garden bean.

Theophrastus and Pliny are the two authors who have spoken of the tree, as naturalists. Those which are now to be quoted, merely give the popular accounts, such as were to be met with in the histories, and memoirs of Alexander's exploits. Of this character is a passage in Quintus Curtius, which undoubtedly refers to the *Ficus Indica*.† “ There were woods,” (in

* Plin. Epist. III. 5.

† Lib. IX. c. 1, p. 193. Vol. II. ed. Bip. *Hinc Poro amneque superato, ad interiora Indiæ processit. Silvæ erant prope in immensum spatium diffusæ, procerisque et in eximiam altitudinem editis arboribus umbrosæ: plerique rami instar ingentium stipitum flexi in humum, rursus, qua se curvaverant, erigebantur adeo, ut species esset non rami resurgentis, sed arboris ex sua radice generatæ.*

India) says this author, "spread to an immense extent, shaded with lofty
 " and gigantic trees. Most of the branches being, like great stems, bent
 " into the ground, again rose upwards, at the place of curvature, so as to
 " afford the appearance, not of a branch that had sent forth fresh shoots,
 " but of a tree produced from its own root." This description, though
 far from accurate, cannot be applied to any other tree, than the Banyan.
 It was evidently derived from a superficial observer. Nor does the account
 given by Strabo, to which we now proceed, although more in detail, differ
 much in character. Strabo was a writer of great learning, and diligent
 research; but he has drawn his information, in this instance, not from the
 best source. We can hardly suppose him to have been unacquainted with
 the writings of Theophrastus, and it may be wondered that, upon such a
 subject, he should not have had recourse to this authority. The passage
 alluded to is in the fifteenth book of his Geography, and to this purpose :
 " Among other things, India produces also many extraordinary trees, of
 " which there is one species that has branches bending downwards, and
 " leaves not less than a shield. Onesicritus, in detailing the natural pro-
 " ductions of Musicania, which, he says, is the most southern part of
 " India, relates, that there are certain large trees of India, the branches
 " of which grow to the length of twelve cubits, then take the remainder of
 " their growth downwards, as if they were bent, till they reach the ground;
 " and having penetrated into the earth, they strike root, like layers. After

* Lib. XV. p. 694. ed. Casaub. (p. 1016. ed. Almelov.) Πολλὰ γὰρ δὴ καὶ δένδρα παράδοξα ἢ Ἰνδικῇ τρέφει, ὧν ἐστὶ καὶ τὸ κάτω νεύοντα, ἔχον τοὺς κλάδους, τὰ δὲ φύλλα ἀσπίδος οὐκ ἐλάττω. Ὀνείκριτος δὲ καὶ περιεργότερον τὰ ἐν τῇ Μουσικανῷ διεξῶν, ἃ φησι νοτιώτατα εἶναι τῆς Ἰνδικῆς, διηγῆται μεγάλα δένδρα εἶναι τινὰ, ὧν τοὺς κλάδους ἀνελθόντας ἐπὶ πῆχεις δώδεκα, ἔπειτα τὴν λοιπὴν αὐξήσιν καταφιρῇ λαμβάνειν, ὡς ἂν κατακαμπτομένους, ἕως ἂν ἄλφωται τῆς γῆς· ἔπειτα κατὰ γῆς διαδοθένται ριζοῦσθαι, ὁμοίως ταῖς κατάρυξιν, εἴτ' ἀναδοθέντας τελεχοῦσθαι· ἐξ οὗ πάλιν ὁμοίως τῇ αὐξήσει κατακαμψθέντας ἄλλην κατάρυχα ποιεῖν, εἴτ' ἄλλην· καὶ οὕτως ἐφεξῆς, ὥς ἂν ἐνὸς δένδρον σκιαδίων γενέσθαι μακρὸν, πολυτύλῳ σκιῇ ὅμοιον. Λέγει δὲ καὶ μεγέθη δένδρων, ὥτε πέντε ἀνθρώποις δυσπερίληπτα εἶναι τὰ τελέχη. Κατὰ δὲ τὸν Ἀκισίην καὶ τὴν συμῶλιν τὴν πρὸς Ἰάρωτιν, καὶ Ἀριστόβουλος εἶρηκε περὶ τῶν κατακαμπτομένων ἔχοντων τοὺς κλάδους, καὶ περὶ τοῦ μεγέθους, ὡς ἂν ἐνὶ δένδρῳ μεσημβρίζειν σκιαζομένους ἰππείας πεντήκοντα· οὗτος δὲ τετρακοσίους.—Ἀπαντας δὲ ὑπερβέβληται, περὶ τοῦ μεγέθους τῶν δένδρων, οἱ φήσαντες ἐωράσθαι πέραν τοῦ Ἰαρώτιδος δένδρον ποιοῦν σκὰς ταῖς μεσημβρίαις πενταγὰδιον. So this passage ought to be connected: but in the text of the editions (which, generally speaking, is very corrupt) the following sentence is interpolated, between the words τετρακοσίους and Ἀπαντας, being evidently out of its place: Λέγει δὲ Ἀριστόβουλος καὶ ἄλλο δένδρον—καρπούς ἔχον ὡς ὁ κύαμος δέκα δακτύλους τὸ μήκος, πλήρεις μέλιτος· τοὺς δὲ φαγόντας οὐ ραδίως σώζεσθαι.

“ this, rising upwards, they are metamorphosed into stems, from which,
 “ in the progress of growing, branches issue again in like manner.
 “ These, similar to those before, bend downwards, and form other layers,
 “ and again others: so that from one tree, there arises a large bower, re-
 “ sembling a pillared booth, or tabernacle. He (Onesicritus) likewise
 “ speaks of the magnitude of the trees, which, he says, is so immense, that
 “ five men can hardly fathom the stems. Aristobulus, when speaking of
 “ the Acesines, and its junction with the Hyarotis, also makes mention of
 “ the trees with down-bent branches, and of their great size, which, he
 “ asserts, will afford shelter to fifty horsemen; the other writer (Onesicri-
 “ tus) even says, to four hundred. But those go beyond all the rest, who
 “ report, that on the farther side of the river Hyarotis, a tree was seen,
 “ which, at noon, made a shade of five stadia.”

This account of Strabo, as I have before stated, rests upon the authority of writers, whose business it was not to be very exact in matters of this nature: it incidentally formed a topic in their narration; and even if they wrote to the best of their knowledge, without a wilful design of misrepresenting the truth, yet, as it was not incumbent on them to investigate, with great nicety, the reports which they had heard, erroneous details were unavoidable. Among other misnomers, they seem to me to have confounded different trees. Perhaps some particulars, which we do not find applicable to the Banyan, may have belonged to the Great Fan Palm (*Corypha umbraculifera*): hence many points of difference, between this passage of Strabo, and the accurate description of Theophrastus, may be explained. The size of the leaf is, in the former, magnified to a large shield (ἀσπίς, *scutum*),* while the latter limits it to a small *pelta*. On the other hand, the circumference of the stem, or trunk of the tree, said to be scarce fathomable by five men, is much below the estimate which we have before noticed. In other instances, the spirit of exaggeration must be supposed to have operated, as in this, when it is related that the shade of the tree, at noon, covered five stadia, which is a space of more than three thousand feet. The emission of the roots from the branches,† which is a very important

* Τὰ δὲ φύλλα ἀσπίδος οὐκ ἐλάττω .

† Ὡς πεντε ἀνθρώποις δυσπερίληπτα εἶναι τὰ γιλέχη .

‡ It is peculiar to several species of the genus *Ficus*, among others to the *Ficus virens*, a large tree, which is a native of South America.

fact, in the natural history of the tree, and most carefully set forth by Theophrastus, is not adverted to by Strabo.

I have hinted that, in some particulars, the *Corypha umbraculifera*, or Great Fan Palm, may have been confounded with the *Ficus Indica*, or Banyan. In a passage of Diodorus Siculus, where a large kind of Indian tree is spoken of, the Fan Palm seems to have been intended by the author. It is in the seventeenth book of his History, where the exploits of Alexander are related : * “ The king,” he says, “ having with his army passed “ the river, proceeded through a country extremely fertile. For it pro- “ duced different species of trees, of uncommon size, some having a height “ of seventy cubits, and such thickness in the stem, that four men could “ not fathom it, and making a shade of three acres.” Neither the height (about one hundred and twenty feet), nor the circumference of the stem (about twenty-four feet), nor the extent of shadow (about three hundred feet), can be reconciled with particulars, which have before been adduced as characteristic of the Banyan-tree.

The Banyan-tree, however, is undoubtedly alluded to in the following passage of Arrian. It is in that portion of his works, which is entitled *Indian History*. He is speaking of the Indian sophists, the wise men, or Fakirs, of ancient India, and continues thus : † “ These sophists go naked, “ and live in the open air, in winter, exposed to the sun ; and in the “ summer, when the sun is overpowering, they retire to meadows, and “ marshy places, under large trees, whose shade, Nearchus says, extends to “ five acres in a circle : and ten thousand men may be sheltered under one “ tree ; of such astonishing dimensions are those trees.” From the words of the original it would seem, that the five acres (or five hundred feet) mentioned, are to be taken for the radius of the circle, which would for the circumference give nearly the same measure, that, according to Strabo,

* Biblioth. Histor. Lib. XVII. T. II. p. 230. lin. 73. ed. Wessel.—‘Αυτὸς δὲ μετὰ τῆς δυνάμεως περάσας τὸν ποταμὸν, προῆγε διὰ χώρας ἀρετῇ διαφερούσης· δένδρων γὰρ εἶχε γένη διαλλάττοντα, καὶ τὸ μὲν ὕψος ἔχοντα πηχῶν ἐβδομήκοντα, τὸ δὲ πᾶχος μόγις ὑπὸ τεττάρων ἀνδρῶν περιλαμβανόμενα, τριῶν δὲ πλέθρων σκιὰν ποιοῦντα.

† Historia Indica, p. 324 and 325, ed. Gronov. Lugd. Bat. 1704. ‘Ουτεὶ γυμνοὶ διαιτῶνται οἱ σοφισταί, τοῦ μὲν χειμῶνος ὑπαίθριοι ἐν τῷ ἡλίῳ, τοῦ δὲ θέρος, ἐπὶ τὸν ὁ ἥλιος κατέχῃ, ἐν τοῖσι λειμῶσι καὶ τοῖσιν ἐλεσιν, ὑπὸ δένδροσι μεγάλοισιν· ὧν τὴν σκίην Νεάρχος λέγει ἐς πέντε πλέθρα ἐν κύκλῳ ἐκταμένην καὶ ἀν’ αὐτοὺς ὑπὸ ἐνὶ δένδρῳ σκιάζεσθαι· τηλικαῦτα εἶναι ταῦτα τὰ δένδρεα.

some writers alleged, namely, five stadia, or upwards of three thousand feet. With such an exaggeration, the report of Nearchus, quoted by Arrian, might coincide. But though we cannot precisely ascertain, in what sense the measurement, spoken of, is to be taken, yet there can hardly be any doubt that the tree, which Arrian had in his mind, was the Banyan. In reading what Arrian relates of the naked philosophers of ancient India, one is reminded of the Fakir, mentioned by Mr. Marsden, as sitting under the Banyan-tree, at Mangee,* who, it would seem, continued a practice that was known to his wise predecessors, many centuries before.

Thus I have collected all that may be supposed to have a reference to the Banyan-tree, in the remaining works of the classic authors. I do not believe, that any passage, or even any allusion, has escaped me. Perhaps the length, to which these observations have been extended, may require an apology. I was tempted to attribute some slight degree of interest to the subject, as the Banyan-tree has, in a manner, been marked by this Society as its own. It has been chosen for the emblem of the Society, and as the type for its seal. The extraordinary nature of this production, and its locality, being peculiar to the remote East, recommended it as an object that might characterize the ASIATIC SOCIETY OF GREAT BRITAIN AND IRELAND. Whether any allegorical sense, in relation to the arts and sciences, their various ramification and extension, their connexion and mutual support, should be combined with it, I leave for others to determine. The motto, joined to our emblem, is "*Quot rami, tot arbores*," or, "Every branch yields a tree:" and whether we adopt the allegory, or not, it is to be wished, that the efforts of this Society may contribute to extend human knowledge, and promote that intellectual improvement, which is calculated to constitute the happiness of our species.

* History of Sumatra, 3d ed. p. 163, note: "Under this tree sat a naked Fakir, who had occupied that situation for twenty-five years; but he did not continue there the whole year through, for his vow obliged him to be, during the four cold months, up to his neck in the waters of the Ganges."